



1 Overview

The CUWB Manager API is a REST API that is automatically ran as a systemd unit following the installation of the cuwb-network package. This API configures all of the resource units required to facilitate the creation, configuration, and deletion of CUWB Networks within the CUWB RTLS platform. This is the vessel through which the CUWB Manager's web-based frontend requests adjustments through HTTP to the CUWB Network's .cuwb saved state files. Users have the option of creating their own control mechanisms utilizing this API by issuing the following requests over any of the host machine's network interfaces on port 5000. The expected response formats are also provided for success, failure, and error scenarios.

1.1 Version information

Version : 1.1

1.2 JSON Format

This information can also be queried through the API itself via `GET /api.json`

1.3 Resources

- CDP Streams
- CUWB Networks
- Calculate Maximum Tags
- Default Settings
- Device Commands
- Device Configurations
- Device Settings
- Devices
- Interface Roles
- Interfaces
- Log Messages
- Magnetometer Calibration
- Packages
- Paired Interfaces
- Position Limits
- RF Settings
- Roles
- Settings

1.4 Produces

- `application/json`
- `text/html`

2 Resources

2.1 CDP Streams

2.1.1 The GET method for a list of all CDP streams.

```
GET /cuwbnetns/{cuwb_name}/cdp-streams
```

2.1.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.1.1.2 Responses

HTTP Code	Description	Schema
200	CDP Stream List	Response 200

Response 200

Name	Schema
cdp-streams <i>optional</i>	< object > array

2.1.2 The GET method for a single CDP stream.

```
GET /cuwbnetns/{cuwb_name}/cdp-streams/{id}
```

2.1.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	id <i>required</i>	The id of the CDP stream to use.	integer

2.1.2.2 Responses

HTTP Code	Description	Schema
200	CDP Stream	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
cdp-stream <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.1.3 The PATCH method for a single CDP stream.

```
PATCH /cuwbnets/{cuwb_name}/cdp-streams/{id}
```

2.1.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	id <i>required</i>	The id of the CDP stream to use.	integer
Body	cdp_stream_body <i>required</i>	The request body	cdp_stream_body

cdp_stream_body

Name	Schema
destination_ip <i>optional</i>	string
destination_port <i>optional</i>	integer
interface <i>optional</i>	string
interface_port <i>optional</i>	integer
time_to_live <i>optional</i>	integer

2.1.3.2 Responses

HTTP Code	Description	Schema
200	CDP Stream	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
cdp-stream <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.2 CUWB Networks

2.2.1 Create a new CUWB Network object.

POST /cuwbnets

2.2.1.1 Parameters

Type	Name	Description	Schema
Body	cuwb_network_body <i>required</i>	The request body	cuwb_network_body

cuwb_network_body

Name	Schema
instance <i>optional</i>	string
name <i>optional</i>	string

2.2.1.2 Responses

HTTP Code	Description	Schema
201	CUWB Network	Response 201
400	Invalid request.	Response 400
409	Conflict.	Response 409

Response 201

Name	Schema
cuwbnets <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.2.2 Get a list of ALL CUWB Networks on the system.

GET /cuwbnets

2.2.2.1 Responses

HTTP Code	Description	Schema
200	CUWB Network List	Response 200

Response 200

Name	Schema
cuwbnets <i>optional</i>	< object > array

2.2.3 Upload a CUWB network.

POST /cuwbnets/upload

2.2.3.1 Parameters

Type	Name	Description	Schema
FormData	cuwb_file <i>optional</i>	A CUWB network file to upload	file

2.2.3.2 Responses

HTTP Code	Description	Schema
201	CUWB Network	Response 201
400	Invalid request.	Response 400
409	CUWB network already exists.	Response 409

Response 201

Name	Schema
cuwbnets <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.2.3.3 Consumes

- `multipart/form-data`

2.2.4 POST an action to a CUWB Network.

POST /cuwbnets/{cuwb_name}

2.2.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of a CUWB network	string
Body	action_body <i>required</i>	The request body	<code>action_body</code>

action_body

Name	Schema
action <i>optional</i>	string
name <i>optional</i>	string

2.2.4.2 Responses

HTTP Code	Description	Schema
200	Action succeeded.	<code>Response 200</code>
400	Invalid request.	<code>Response 400</code>
404	Not found.	<code>Response 404</code>

Response 200

Name	Schema
status <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.2.5 Get details about ONE CUWB Network.

```
GET /cuwbnets/{cuwb_name}
```

2.2.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of a CUWB network	string

2.2.5.2 Responses

HTTP Code	Description	Schema
200	CUWB Network	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
cuwbnets <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.2.6 Delete ONE CUWB Network record.

```
DELETE /cuwbnets/{cuwb_name}
```

2.2.6.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of a CUWB network	string

2.2.6.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.2.7 Update ONE CUWB Network record.

```
PATCH /cuwbnets/{cuwb_name}
```

2.2.7.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of a CUWB network	string
Body	cuwb_network_body <i>required</i>	The request body	cuwb_network_body

cuwb_network_body

Name	Schema
instance <i>optional</i>	string
name <i>optional</i>	string

2.2.7.2 Responses

HTTP Code	Description	Schema
200	CUWB Network	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404

Response 200

Name	Schema
cuwbnets <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.2.8 Download a CUWB network.

```
GET /cuwbnets/{cuwb_name}/download
```

2.2.8.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of a CUWB network	string

2.2.8.2 Responses

HTTP Code	Description	Schema
200	CUWB Network File	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
file <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.3 Calculate Maximum Tags**2.3.1 Run a maximum tags calculation with parameters.**

```
POST /calculate_maximum_tags
```

2.3.1.1 Parameters

Type	Name	Description	Schema
Body	calculate_maximum_tags_parameterized_body <i>required</i>	The request body	calculate_maximum_tags_parameterized_body

calculate_maximum_tags_parameterized_body

Name	Schema
device_configuration <i>optional</i>	string
maximum_tag_period <i>optional</i>	integer
number_of_seeders <i>optional</i>	integer
seeder_period <i>optional</i>	integer
tag_period <i>optional</i>	integer

2.3.1.2 Responses

HTTP Code	Description	Schema
200	Calculate maximum tags	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
maximum_tags_calculation <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
maximum_tags_calculation <i>optional</i>	string

2.3.2 Run a maximum tags calculation.

POST /cuwbnets/{cuwb_name}/calculate_maximum_tags

2.3.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	calculate_maximum_tags_body <i>required</i>	The request body	calculate_maximum_tags_body

calculate_maximum_tags_body

Name	Schema
device_configuration_id <i>optional</i>	integer
role_id <i>optional</i>	integer

2.3.2.2 Responses

HTTP Code	Description	Schema
200	Calculate maximum tags	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
maximum_tags_calculation <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
maximum_tags_calculation <i>optional</i>	string

2.4 Default Settings

2.4.1 The GET method for a list of all settings.

GET /default-settings

2.4.1.1 Responses

HTTP Code	Description	Schema
200	Setting List	Response 200

Response 200

Name	Schema
default_settings <i>optional</i>	string

2.4.2 The GET method for a single setting.

GET /default-settings/{key}

2.4.2.1 Parameters

Type	Name	Description	Schema
Path	key <i>required</i>	The key of the setting to use.	string

2.4.2.2 Responses

HTTP Code	Description	Schema
200	Setting	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
default_setting <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.5 Device Commands**2.5.1 The POST method for a device command.**

```
POST /cuwbnet/{cuwb_name}/devices/{device_key}/action
```

2.5.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Body	device_command_body <i>required</i>	The request body	device_command_body

device_command_body

Name	Schema
action <i>optional</i>	string
color <i>optional</i>	string
mode <i>optional</i>	string

2.5.1.2 Responses

HTTP Code	Description	Schema
200	Device Command	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404

Response 200

Name	Schema
status <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.6 Device Configurations

2.6.1 The POST method for adding a new device configuration.

```
POST /cuwbnets/{cuwb_name}/device_configurations
```

2.6.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Body	device_configuration_body <i>required</i>	The request body	device_configuration_body

device_configuration_body

Name	Schema
accelerometer_period <i>optional</i>	integer
gyroscope_period <i>optional</i>	integer
led_brightness <i>optional</i>	string
magnetometer_period <i>optional</i>	integer
name <i>optional</i>	string
position_period <i>optional</i>	integer
pressure_period <i>optional</i>	integer
quaternion_period <i>optional</i>	integer
temperature_period <i>optional</i>	integer

2.6.1.2 Responses

HTTP Code	Description	Schema
201	Device Configuration	Response 201
400	Invalid request.	Response 400
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 201

Name	Schema
device_configuration <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.6.2 The GET method for a list of all device configurations.

```
GET /cuwbnet/{cuwb_name}/device_configurations
```

2.6.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string

2.6.2.2 Responses

HTTP Code	Description	Schema
200	Device Configuration List	Response 200

Response 200

Name	Schema
device_configurations <i>optional</i>	string

2.6.3 The GET method for a single device configuration.

```
GET /cuwbnet/{cuwb_name}/device_configurations/{device_configuration_id}
```

2.6.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Path	device_configuration_id <i>required</i>	The ID of the device configuration	integer

2.6.3.2 Responses

HTTP Code	Description	Schema
200	Device Configuration	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
device_configuration <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.6.4 The DELETE method for a single device_configuration.

```
DELETE /cuwbnets/{cuwb_name}/device_configurations/{device_configuration_id}
```

2.6.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Path	device_configuration_id <i>required</i>	The ID of the device configuration	integer

2.6.4.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204
409	Conflict.	Response 409

Response 204

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.6.5 The PATCH method for a device configuration.

```
PATCH /cuwbnets/{cuwb_name}/device_configurations/{device_configuration_id}
```

2.6.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Path	device_configuration_id <i>required</i>	The ID of the device configuration	integer
Body	device_configuration_body <i>required</i>	The request body	device_configuration_body

device_configuration_body

Name	Schema
accelerometer_period <i>optional</i>	integer
gyroscope_period <i>optional</i>	integer
led_brightness <i>optional</i>	string
magnetometer_period <i>optional</i>	integer
name <i>optional</i>	string
position_period <i>optional</i>	integer
pressure_period <i>optional</i>	integer
quaternion_period <i>optional</i>	integer
temperature_period <i>optional</i>	integer

2.6.5.2 Responses

HTTP Code	Description	Schema
200	Device Configuration	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
device_configuration <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.7 Device Settings

2.7.1 The POST method to create a new device setting.

```
POST /cuwbnets/{cuwb_name}/device-settings
```

2.7.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	device_settings_post_body <i>required</i>	The request body	device_settings_post_body

device_settings_post_body

Name	Schema
device_id <i>optional</i>	integer

2.7.1.2 Responses

HTTP Code	Description	Schema
200	Device Setting	Response 200
400	Invalid request.	Response 400
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
device_setting <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.7.2 The GET method for a list of all device settings.

```
GET /cuwbnets/{cuwb_name}/device-settings
```

2.7.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.7.2.2 Responses

HTTP Code	Description	Schema
200	Device Setting List	Response 200

Response 200

Name	Schema
device_settings <i>optional</i>	string

2.7.3 The GET method for a list of all device settings for a Device ID.

```
GET /cuwbnets/{cuwb_name}/devices/{device_id}/settings
```

2.7.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_id <i>required</i>	The Device ID the setting is used for.	string

2.7.3.2 Responses

HTTP Code	Description	Schema
200	Device Settings List	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
device_settings <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.7.4 The GET method for a single device setting.

```
GET /cuwbnets/{cuwb_name}/devices/{device_id}/settings/{key}
```

2.7.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_id <i>required</i>	The Device ID the setting is used for.	string
Path	key <i>required</i>	The key of the setting to use.	string

2.7.4.2 Responses

HTTP Code	Description	Schema
200	Device Setting	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
device_setting <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.7.5 The PUT method for a single device setting.

```
PUT /cuwbnets/{cuwb_name}/devices/{device_id}/settings/{key}
```

2.7.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_id <i>required</i>	The Device ID the setting is used for.	string
Path	key <i>required</i>	The key of the setting to use.	string
Body	device_settings_put_body <i>required</i>	The request body	object

2.7.5.2 Responses

HTTP Code	Description	Schema
200	Device Setting	Response 200
500	Internal error.	Response 500

Response 200

Name	Schema
device_setting <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.7.6 The DELETE method for a device setting.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_id}/settings/{key}
```

2.7.6.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_id <i>required</i>	The Device ID the setting is used for.	string
Path	key <i>required</i>	The key of the setting to use.	string

2.7.6.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.7.7 The PATCH method for a single device setting.

```
PATCH /cuwbnets/{cuwb_name}/devices/{device_id}/settings/{key}
```

2.7.7.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_id <i>required</i>	The Device ID the setting is used for.	string
Path	key <i>required</i>	The key of the setting to use.	string
Body	device_settings_put_body <i>required</i>	The request body	object

2.7.7.2 Responses

HTTP Code	Description	Schema
200	Device Setting	Response 200
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
device_setting <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.8 Devices**2.8.1 The POST method for adding a new device.**

```
POST /cuwbnets/{cuwb_name}/devices
```

2.8.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	device_body <i>required</i>	The request body	device_body

device_body

Name	Schema
disabled <i>optional</i>	boolean
interfaces <i>optional</i>	string
serial_number <i>optional</i>	string

2.8.1.2 Responses

HTTP Code	Description	Schema
201	Device	Response 201
400	Invalid request.	Response 400
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 201

Name	Schema
device <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.8.2 The GET method for a list of all devices.

```
GET /cuwbnets/{cuwb_name}/devices
```

2.8.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.8.2.2 Responses

HTTP Code	Description	Schema
200	Device List	Response 200

Response 200

Name	Schema
devices <i>optional</i>	string

2.8.3 The GET method for a single device.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}
```

2.8.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string

2.8.3.2 Responses

HTTP Code	Description	Schema
200	Device	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
device <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.8.4 The DELETE method for a single device.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}
```

2.8.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string

2.8.4.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.8.5 The PATCH method for a single device.

```
PATCH /cuwbnets/{cuwb_name}/devices/{device_key}
```

2.8.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Body	device_body <i>required</i>	The request body	device_body

device_body

Name	Schema
disabled <i>optional</i>	boolean
interfaces <i>optional</i>	string
serial_number <i>optional</i>	string

2.8.5.2 Responses

HTTP Code	Description	Schema
200	Device	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
device <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.8.6 The DELETE method for multiple devices

DELETE /cuwbnets/{cuwb_name}/devices

2.8.6.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	<i>multiple_device_delete_body</i> <i>required</i>	The request body	multiple_device_delete_body

multiple_device_delete_body

Name	Schema
delete <i>optional</i>	< string > array

2.8.6.2 Responses

HTTP Code	Description	Schema
204	Devices deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.8.7 The PATCH method for multiple devices

PATCH /cuwbnets/{cuwb_name}/devices

2.8.7.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name *required	The name of the database to use.	string
Body	multiple_device_patch_body *required	The request body	object

2.8.7.2 Responses

HTTP Code	Description	Schema
200	Device Patch Statuses	object
400	Invalid request.	object
404	Not found.	object
500	Internal error.	object

2.9 Interface Roles

2.9.1 The GET method for a list of all roles.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}-{interface_identifier}/roles
```

2.9.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.9.1.2 Responses

HTTP Code	Description	Schema
200	Device Roles	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
roles <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.9.2 The GET method for a single role.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}-{interface_identifier}/roles/{role_id}
```

2.9.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer
Path	role_id <i>required</i>	An id for roles.	integer

2.9.2.2 Responses

HTTP Code	Description	Schema
200	Device Role	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
role <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.9.3 The DELETE method for a single role.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}-{interface_identifier}/roles/{role_id}
```

2.9.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer
Path	role_id <i>required</i>	An id for roles.	integer

2.9.3.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.9.4 The GET method for a list of all roles.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces/{interface_identifier}/roles
```

2.9.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.9.4.2 Responses

HTTP Code	Description	Schema
200	Device Roles	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
roles <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.9.5 The GET method for a single role.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces/{interface_identifier}/roles/{role_id}
```

2.9.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer
Path	role_id <i>required</i>	An id for roles.	integer

2.9.5.2 Responses

HTTP Code	Description	Schema
200	Device Role	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
role <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.9.6 The DELETE method for a single role.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces/{interface_identifier}/roles/{role_id}
```

2.9.6.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer
Path	role_id <i>required</i>	An id for roles.	integer

2.9.6.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.10 Interfaces**2.10.1 The GET method for a single interface.**

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}-{interface_identifier}
```

2.10.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.10.1.2 Responses

HTTP Code	Description	Schema
200	Device Interface	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
interface <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.10.2 The DELETE method for a single interface.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}-{interface_identifier}
```

2.10.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.10.2.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.10.3 The GET method for a list of all interfaces.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces
```

2.10.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string

2.10.3.2 Responses

HTTP Code	Description	Schema
200	Device Interface	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
interfaces <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.10.4 The GET method for a single interface.

```
GET /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces/{interface_identifier}
```

2.10.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.10.4.2 Responses

HTTP Code	Description	Schema
200	Device Interface	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
interface <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.10.5 The DELETE method for a single interface.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}/interfaces/{interface_identifier}
```

2.10.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	integer

2.10.5.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.11 Log Messages**2.11.1 The GET method for a list of all log messages.**

```
GET /cuwbnets/{cuwb_name}/log_messages
```

2.11.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.11.1.2 Responses

HTTP Code	Description	Schema
200	Log Message List	Response 200

Response 200

Name	Schema
log_messages <i>optional</i>	< string > array

2.12 Magnetometer Calibration**2.12.1 Create a new magnetometer calibration.**

```
POST /cuwbnets/{cuwb_name}/devices/{device_key}/set_magnetometer_calibration
```

2.12.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	device_key <i>required</i>	Either a Ciholas serial number or an integer ID.	string
Body	mangetometer_calibration_body <i>required</i>	The request body	mangetometer_calibration_body

magnetometer_calibration_body

Name	Schema
x_offset <i>optional</i>	integer
y_offset <i>optional</i>	integer
z_offset <i>optional</i>	integer

2.12.1.2 Responses

HTTP Code	Description	Schema
201	Magnetometer Calibration	Response 201
400	Invalid request.	Response 400
404	Not found.	Response 404
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 201

Name	Schema
magnetometer_calibration <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.13 Packages

2.13.1 The GET method for PPA packages.

GET /packages

2.13.1.1 Responses

HTTP Code	Description	Schema
200	Packages	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
ppa_status <i>optional</i>	string

Response 404

Name	Schema
ppa_status <i>optional</i>	string

2.14 Paired Interfaces

2.14.1 The PUT method for adding a new paired interface

PUT /cuwbnets/{cuwb_name}/devices/{device_key}/{interface_identifier}/{_type}_interfaces

2.14.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Path	device_key <i>required</i>	A Ciholas serial number.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	string
Path	_type <i>required</i>	A type of paired interfaces.	string

2.14.1.2 Responses

HTTP Code	Description	Schema
201	Paired Interface	Response 201
400	Invalid Request.	Response 400
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 201

Name	Schema
paired_interface <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.14.2 The DELETE method for a single paired_interface.

```
DELETE /cuwbnets/{cuwb_name}/devices/{device_key}/{interface_identifier}/{_type}_interfaces/{interface}
```

2.14.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the cuwbnet to use.	string
Path	device_key <i>required</i>	A Ciholas serial number.	string
Path	interface_identifier <i>required</i>	An identifier for interfaces.	string
Path	_type <i>required</i>	A type of paired interfaces.	string
Path	interface <i>required</i>	The paired interface to interact with.	string

2.14.2.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204
409	Conflict.	Response 409

Response 204

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.15 Position Limits**2.15.1 Create a new Position Limit object.**

```
POST /cuwbnets/{cuwb_name}/position_limits
```

2.15.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	position_limits_post_body <i>required</i>	The POST body - must include all fields.	position_limits_post_body

position_limits_post_body

Name	Schema
max_x <i>optional</i>	integer
max_y <i>optional</i>	integer
max_z <i>optional</i>	integer
min_x <i>optional</i>	integer
min_y <i>optional</i>	integer
min_z <i>optional</i>	integer
name <i>optional</i>	string

2.15.1.2 Responses

HTTP Code	Description	Schema
200	Position Limit	Response 200
400	Invalid request.	Response 400
409	Conflict.	Response 409

Response 200

Name	Schema
position_limits <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.15.2 The GET method for a list of all position limits.

```
GET /cuwbnets/{cuwb_name}/position_limits
```

2.15.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.15.2.2 Responses

HTTP Code	Description	Schema
200	Position Limits List	Response 200

Response 200

Name	Schema
position_limits <i>optional</i>	string

2.15.3 The GET method for a single position limit.

```
GET /cuwbnets/{cuwb_name}/position_limits/{name}
```

2.15.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the position limit to use.	string

2.15.3.2 Responses

HTTP Code	Description	Schema
200	Position Limits	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
position_limits <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.15.4 The DELETE method for a single position limit.

```
DELETE /cuwbnets/{cuwb_name}/position_limits/{name}
```

2.15.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the position limit to use.	string

2.15.4.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.15.5 The PATCH method for a single position limit.

```
PATCH /cuwbnets/{cuwb_name}/position_limits/{name}
```

2.15.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the position limit to use.	string
Body	position_limits_patch_body <i>required</i>	The PATCH body - must include at least one field.	position_limits_patch_body

position_limits_patch_body

Name	Schema
max_x <i>optional</i>	integer
max_y <i>optional</i>	integer
max_z <i>optional</i>	integer
min_x <i>optional</i>	integer
min_y <i>optional</i>	integer
min_z <i>optional</i>	integer

2.15.5.2 Responses

HTTP Code	Description	Schema
200	Position Limits	Response 200
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
position_limits <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.16 RF Settings

2.16.1 Create a new RF Settings object.

```
POST /cuwbnets/{cuwb_name}/rf_settings
```

2.16.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	rf_settings_post_body <i>required</i>	The POST body - must include all fields.	rf_settings_post_body

rf_settings_post_body

Name	Schema
bit_rate <i>optional</i>	integer
channel <i>optional</i>	integer
name <i>optional</i>	string
preamble_code <i>optional</i>	integer
preamble_length <i>optional</i>	integer
prf <i>optional</i>	integer

2.16.1.2 Responses

HTTP Code	Description	Schema
200	RF Setting	Response 200
400	Invalid request.	Response 400
409	Conflict.	Response 409

Response 200

Name	Schema
rf_settings <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

2.16.2 The GET method for a list of all RF Settings.

```
GET /cuwbnets/{cuwb_name}/rf_settings
```

2.16.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.16.2.2 Responses

HTTP Code	Description	Schema
200	RF Settings List	Response 200

Response 200

Name	Schema
rf_settings <i>optional</i>	string

2.16.3 The GET method for a single RF Settings.

```
GET /cuwbnets/{cuwb_name}/rf_settings/{name}
```

2.16.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the RF Settings to use.	string

2.16.3.2 Responses

HTTP Code	Description	Schema
200	RF Setting	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
rf_settings <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.16.4 The DELETE method for a single RF Settings.

```
DELETE /cuwbnets/{cuwb_name}/rf_settings/{name}
```

2.16.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the RF Settings to use.	string

2.16.4.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.16.5 The PATCH method for a single RF Settings.

```
PATCH /cuwbnets/{cuwb_name}/rf_settings/{name}
```

2.16.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	name <i>required</i>	The name of the RF Settings to use.	string
Body	rf_settings_patch_body <i>required</i>	The PATCH body - must include at least one field.	rf_settings_patch_body

rf_settings_patch_body

Name	Schema
bit_rate <i>optional</i>	integer
channel <i>optional</i>	integer
preamble_code <i>optional</i>	integer
preamble_length <i>optional</i>	integer
prf <i>optional</i>	integer

2.16.5.2 Responses

HTTP Code	Description	Schema
200	RF Setting	Response 200
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
rf_settings <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.17 Roles**2.17.1 The POST method for adding a new role.**

```
POST /cuwbnets/{cuwb_name}/roles
```

2.17.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	role_body <i>required</i>	The request body	role_body

role_body

Name	Schema
name <i>optional</i>	string
network_period <i>optional</i>	integer
window_duration <i>optional</i>	integer

2.17.1.2 Responses

HTTP Code	Description	Schema
201	Device Role	Response 201
400	Invalid request.	Response 400
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 201

Name	Schema
role <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.17.2 The GET method for a list of all roles.

```
GET /cuwbnets/{cuwb_name}/roles
```

2.17.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.17.2.2 Responses

HTTP Code	Description	Schema
200	Device Roles	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
roles <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.17.3 The GET method for a single role.

```
GET /cuwbnets/{cuwb_name}/roles/{role_id}
```

2.17.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	role_id <i>required</i>	An id for roles.	integer

2.17.3.2 Responses

HTTP Code	Description	Schema
200	Device Role	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
role <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.17.4 The DELETE method for a single role.

```
DELETE /cuwbnets/{cuwb_name}/roles/{role_id}
```

2.17.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	role_id <i>required</i>	An id for roles.	integer

2.17.4.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string

2.17.5 The PATCH method for a single role.

```
PATCH /cuwbnets/{cuwb_name}/roles/{role_id}
```

2.17.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	role_id <i>required</i>	An id for roles.	integer
Body	role_body <i>required</i>	The request body	role_body

role_body

Name	Schema
name <i>optional</i>	string
network_period <i>optional</i>	integer
window_duration <i>optional</i>	integer

2.17.5.2 Responses

HTTP Code	Description	Schema
200	Role	Response 200
400	Invalid request.	Response 400
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
role <i>optional</i>	string

Response 400

Name	Schema
message <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.18 Settings

2.18.1 The POST method to create a new setting.

```
POST /cuwbnets/{cuwb_name}/settings
```

2.18.1.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	settings_body <i>required</i>	The request body	object

2.18.1.2 Responses

HTTP Code	Description	Schema
200	Setting	Response 200
409	Conflict.	Response 409
500	Internal error.	Response 500

Response 200

Name	Schema
setting <i>optional</i>	string

Response 409

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.18.2 The GET method for a list of all settings.

```
GET /cuwbnets/{cuwb_name}/settings
```

2.18.2.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string

2.18.2.2 Responses

HTTP Code	Description	Schema
200	Setting List	Response 200

Response 200

Name	Schema
settings_list <i>optional</i>	string

2.18.3 The PUT method for a single setting.

```
PUT /cuwbnets/{cuwb_name}/settings
```

2.18.3.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	settings_body <i>required</i>	The request body	object

2.18.3.2 Responses

HTTP Code	Description	Schema
200	Setting	Response 200
500	Internal error.	Response 500

Response 200

Name	Schema
setting <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.18.4 The PATCH method for a single setting.

```
PATCH /cuwbnets/{cuwb_name}/settings
```

2.18.4.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Body	settings_body <i>required</i>	The request body	object

2.18.4.2 Responses

HTTP Code	Description	Schema
200	Setting	Response 200
404	Not found.	Response 404
500	Internal error.	Response 500

Response 200

Name	Schema
setting <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

Response 500

Name	Schema
message <i>optional</i>	string

2.18.5 The GET method for a single setting.

```
GET /cuwbnets/{cuwb_name}/settings/{key}
```

2.18.5.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	key <i>required</i>	The key of the setting to use.	string

2.18.5.2 Responses

HTTP Code	Description	Schema
200	Setting	Response 200
404	Not found.	Response 404

Response 200

Name	Schema
setting <i>optional</i>	string

Response 404

Name	Schema
message <i>optional</i>	string

2.18.6 The DELETE method for a single setting.

```
DELETE /cuwbnets/{cuwb_name}/settings/{key}
```

2.18.6.1 Parameters

Type	Name	Description	Schema
Path	cuwb_name <i>required</i>	The name of the database to use.	string
Path	key <i>required</i>	The key of the setting to use.	string

2.18.6.2 Responses

HTTP Code	Description	Schema
204	Item deleted.	Response 204

Response 204

Name	Schema
message <i>optional</i>	string